



# Department of Health and Human Services **Division of Public and Behavioral Health**

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## Assembly Committee on Health and Human Services

***Brian Sandoval, Governor***

***Romaine Gilliland, Director***

***Richard Whitley, Administrator***

***Tracey D. Green, MD, Chief Medical Officer***

*February 6, 2015*

# Measles Overview

- **An acute viral respiratory illness:**
  - *Morbilivirus*
- **Highly Contagious:**
  - The term ‘contagious’ means that it has the ability to jump from one person to another.
- **Highly Infectious:**
  - The term ‘infectious’ means that an unprotected person only needs to be exposed to a very small amount of virus in order to become ill later.
  - Approximately 90% of unprotected people who are exposed to this illness will become ill with it.
- **The New World:**
  - Carried here by explorers.
  - Decimated native peoples in the Americas.



# Measles Pathology

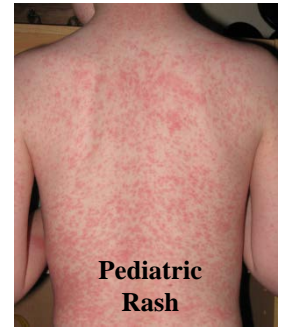
## Four Stages of Measles Illness:

1. **Incubation Period:** Usually lasts from 10 to 14 days
2. **Prodrome Period:** Initial symptoms begin to appear after 10 to 14 days, and will last for 2 to 3 days:
  - Fever
  - Fatigue
  - Decreased appetite
  - Runny eyes and nose
  - Cough
  - May also include: vomiting, diarrhea, abdominal pain, sore throat, swollen glands
3. **Rash Period:** Usually begins 14 to 17 days after exposure:
  - Usually starts on the face/scalp, then spreads to the neck/trunk, then arms and legs.
  - Patients may begin to feel better w/in about 48 hours after rash starts.
4. **Recovery Period:** A cough may last for 1 to 2 weeks after rash is resolved.

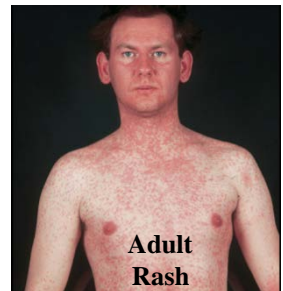
Koplik Spots on Soft Palate



Pediatric Rash



Adult Rash



 **Infectious four days before symptoms, and four days after rash**



# Measles is a Vaccine Preventable Disease

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## ☐ **Pre-Measles Vaccine Era:**

- ☐ Considered a childhood disease
- ☐ In the developing world, as many as 5% of cases may have perished
- ☐ Post-illness morbidities related to swelling of the brain (e.g. hearing loss, etc.)

## ☐ **Post-Measles Vaccine Era:**

- ☐ A viable vaccine was first introduced in 1963
- ☐ The Measles/Mumps/Rubella (aka: MMR) vaccine was licensed here in the U.S. in 2005
- ☐ U.S. declared ongoing measles transmission eliminated in 2000

# Measles Vaccine

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## ☐ **The MMR vaccine is our best weapon:**

- 99% of those who receive their two (2) doses of this vaccine will develop adequate immunity against this disease

## ☐ **Vaccination Calendar for Children:**

### ■ As per the CDC's recommendations:

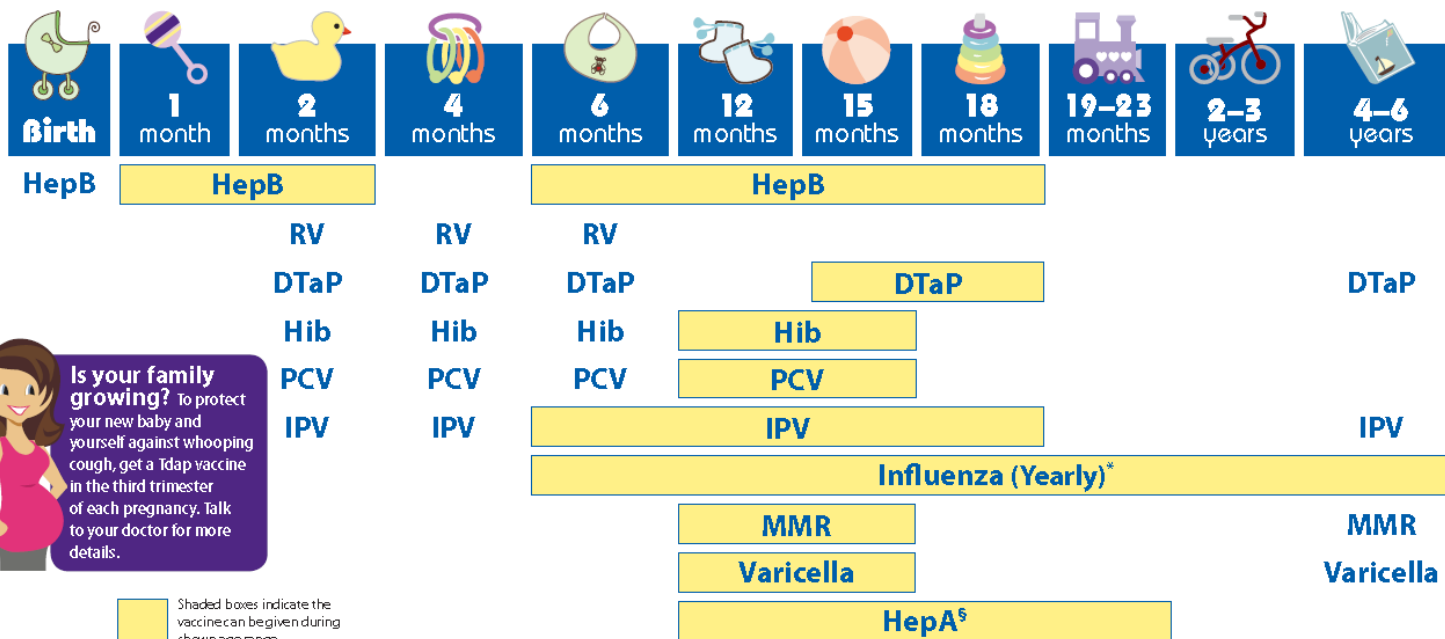
- ☐ First dose at 12 through 15 months of age
- ☐ Second dose (booster) between four and six years of age
- ☐ Can give the second dose earlier, as long as it is at least 28 days after the first dose

## ☐ **Vaccination Calendar for Adults:**

- Unvaccinated: two appropriately spaced doses
- If unsure, it is OK to get another dose

# Childhood Immunization Schedule

## 2015 Recommended Immunizations for Children from Birth Through 6 Years Old



**NOTE:** If your child misses a shot, you don't need to start over, just go back to your child's doctor for the next shot. Talk with your child's doctor if you have questions about vaccines.

**FOOTNOTES:**

- \* Two doses given at least four weeks apart are recommended for children aged 6 months through 8 years of age who are getting an influenza (flu) vaccine for the first time and for some other children in this age group.
- § Two doses of HepA vaccine are needed for lasting protection. The first dose of HepA vaccine should be given between 12 months and 23 months of age. The second dose should be given 6 to 18 months later. HepA vaccination may be given to any child 12 months and older to protect against HepA. Children and adolescents who did not receive the HepA vaccine and are at high-risk, should be vaccinated against HepA.

*If your child has any medical conditions that put him at risk for infection or is traveling outside the United States, talk to your child's doctor about additional vaccines that he may need.*

SEE BACK PAGE FOR MORE INFORMATION ON VACCINE-PREVENTABLE DISEASES AND THE VACCINES THAT PREVENT THEM.

For more information, call toll free  
**1-800-CDC-INFO** (1-800-232-4636)  
or visit  
<http://www.cdc.gov/vaccines>



U.S. Department of  
Health and Human Services  
Centers for Disease  
Control and Prevention



American Academy  
of Pediatrics



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# Measles Dose #1

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- ❑ Immunization rates for children aged 19 to 36 months having at least one dose of MMR.
- ❑ How do Nevada's MMR immunization rates for this bracket compare with our neighbors (as of 2013\*)?
  - ❑ U.S.: 91.9%
  - ❑ Nevada: 90.4%
  - ❑ California: 90.7%
  - ❑ Arizona: 91.4%
  - ❑ Utah: 92.6%
  - ❑ Washington: 93.5%
  - ❑ Oregon: 89.4%
  - ❑ Colorado: 86.0%

\* National Immunization Survey data retrieved from <http://www.cdc.gov/nchs/nis.htm>



# Measles Dose #2 in Nevada

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- With over 90% of our 19 to 36 month olds receiving their first dose of MMR, how are we doing on getting our children covered for their second dose of MMR (aka: booster)?
  - 2013-2014 Public School Survey: 96%\*
  - 2013-2014 Private School Survey: 93%\*

\* Reflects Kindergarten-aged children who are enrolled and are up-to-date on all of their vaccinations as per the ACIP schedule.



# Nevada's WebIZ

□ For those Nevadans who would like to know their vaccination status:

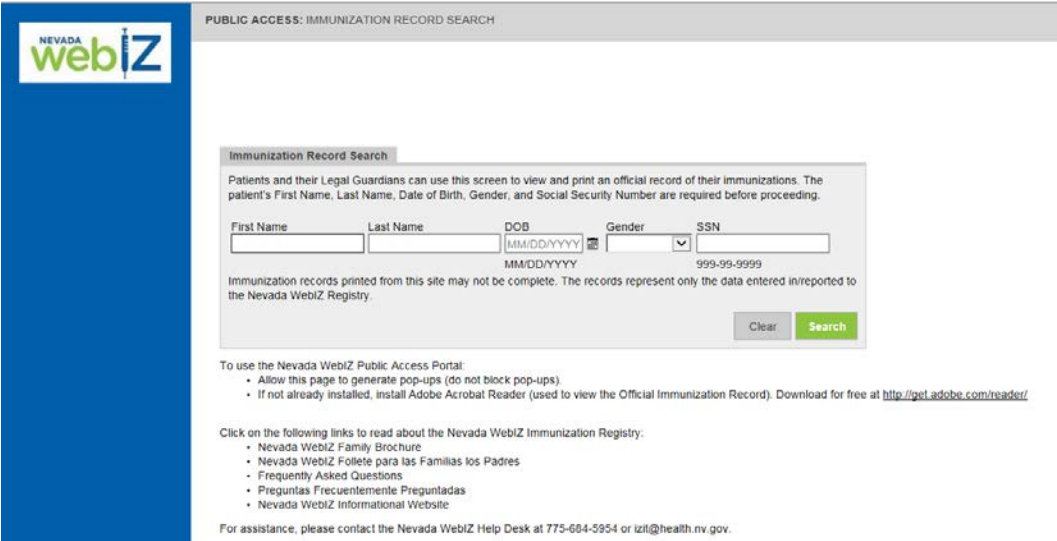
■ [www.izrecord.nv.gov](http://www.izrecord.nv.gov)

■ Full Name

■ DOB

■ Gender

■ SS#



The screenshot displays the 'PUBLIC ACCESS: IMMUNIZATION RECORD SEARCH' page. On the left is a blue vertical bar with the 'NEVADA webIZ' logo. The main content area has a light gray header. Below the header is a form titled 'Immunization Record Search'. The form includes instructions: 'Patients and their Legal Guardians can use this screen to view and print an official record of their immunizations. The patient's First Name, Last Name, Date of Birth, Gender, and Social Security Number are required before proceeding.' The form fields are: 'First Name' (text input), 'Last Name' (text input), 'DOB' (dropdown menu with 'MM/DD/YYYY' and a calendar icon), 'Gender' (dropdown menu), and 'SSN' (text input with placeholder '999-99-9999'). Below the fields is a disclaimer: 'Immunization records printed from this site may not be complete. The records represent only the data entered in/reported to the Nevada WebIZ Registry.' At the bottom right of the form are 'Clear' and 'Search' buttons. Below the form, there is a section 'To use the Nevada WebIZ Public Access Portal:' with two bullet points: 'Allow this page to generate pop-ups (do not block pop-ups)' and 'If not already installed, install Adobe Acrobat Reader (used to view the Official Immunization Record). Download for free at <http://get.adobe.com/reader/>'. Another section 'Click on the following links to read about the Nevada WebIZ Immunization Registry:' lists five links: 'Nevada WebIZ Family Brochure', 'Nevada WebIZ Folleto para las Familias los Padres', 'Frequently Asked Questions', 'Preguntas Frecuentemente Preguntadas', and 'Nevada WebIZ Informational Website'. At the very bottom, it says 'For assistance, please contact the Nevada WebIZ Help Desk at 775-684-5954 or [izit@health.nv.gov](mailto:izit@health.nv.gov)'.

# Measles Reemergence in the U.S.

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- ❑ **Until recently, this was an illness of foreign visitors and U.S. citizens returning from overseas:**
  - Primarily amongst unvaccinated and susceptible travelers who contracted the disease while overseas.
- ❑ **For those who can not receive the vaccine, they rely on *herd immunity* to protect them:**
  - Children <1 year old
  - Immune compromised
  - **Herd Immunity:** when over 90% of a population are immunized, invading pathogens can not find enough susceptible hosts to maintain an outbreak.
- ❑ **One in twelve children in the U.S. have not received their first dose of MMR:**
  - This elevates a community's susceptibility to this illness.



# Current U.S. Outbreak

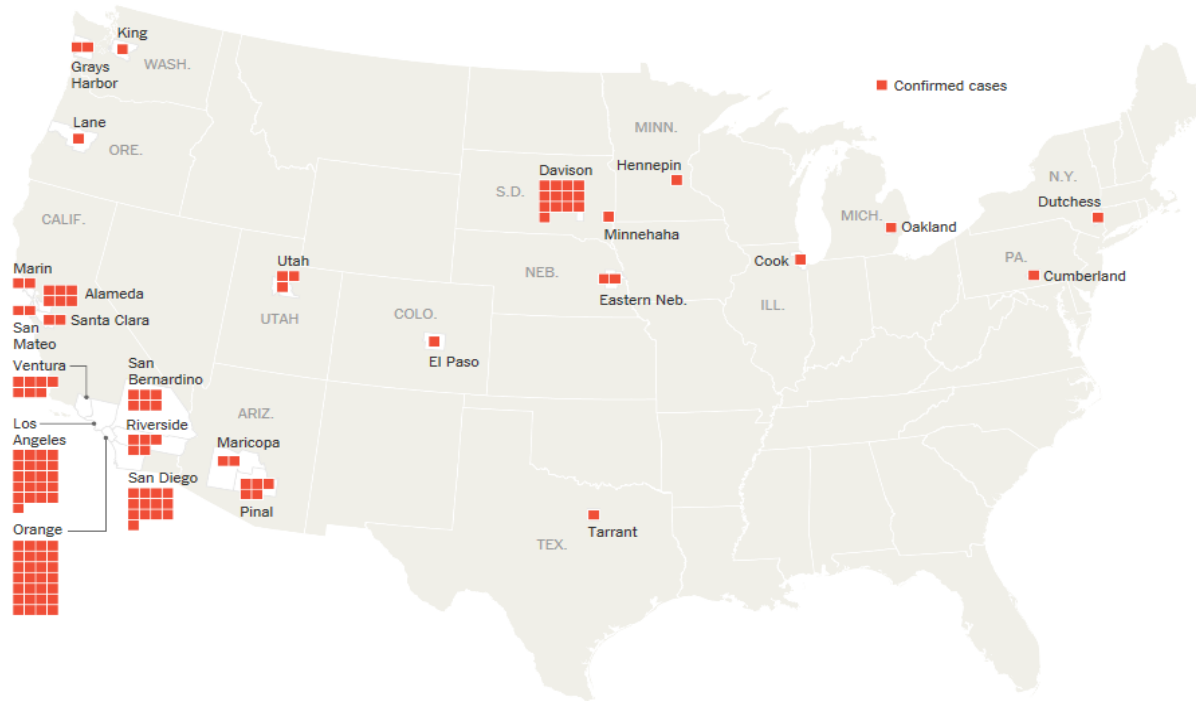
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- ❑ To date, the CDC reports 105 confirmed Measles cases from 14 states.
- ❑ Most of those are part of an ongoing multistate measles outbreak that began in CA:
  - Cases have ranged from 7 months to 70 years of age
- ❑ Majority of cases were not vaccinated, or do not know if they were ever vaccinated.
- ❑ About 25% of unvaccinated people who get measles will be hospitalized.
- ❑ About one in 500 of those may die from measles.

# Measles Map\*

## Where Cases Have Been Reported This Year

A majority of the cases this year have been tied to an outbreak at Disneyland, which began in December. At least 40 people who visited or worked at the theme park contracted measles, and the disease has now spread to at least six other states. The map shows the counties where cases have been reported. DATA AS OF FEB. 2



Notes: Totals shown are higher than the 102 cases reported by the C.D.C. through Jan. 30. Four of the 13 Davison County, S.D., cases are residents of other states. Nebraska reports cases by the local health department district, not counties.

\* New York Times, published February 2, 2015:  
<http://www.nytimes.com/interactive/2015/02/02/us/measles-facts.html>



# Measles in Nevada

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## □ 2000 to 2014:

- Nevada reported 14 cases of Measles to the CDC
- Almost all of these cases were contracted outside of the U.S.

## □ 2015:



- Eleven Nevadans were evaluated for Measles

- Two confirmed
- Two probable
- Five suspect
- Two ruled out

*Note: Being evaluated with lab results pending*

# Measles Response in Nevada

## □ State-level Technical Bulletins (examples)



**Technical Bulletin**  
**Division of Public and Behavioral Health**

Date: January 27, 2015  
To: Measles – Provider Update  
Contact: Julie Peek, Manager, Office of Public Health Informatics and Epidemiology  
To: All Providers and Medical Facilities

**Background:**  
Before the implementation of the measles vaccine, measles caused significant morbidity, mortality and disability in the United States (US). In the decade before the widespread vaccination campaigns, an estimated 3 to 4 million Americans contracted measles resulting in 48,000 hospitalizations, 400-500 deaths and 4,000 disabled patients especially after developing measles encephalitis. Following the introduction of measles vaccine, cases of measles declined dramatically in the US and worldwide. And, due to a sustained high 2-dose measles-mumps-rubella (MMR) vaccine coverage in children, measles was declared at the beginning of the century as an eliminated disease in the US where no measles transmission occurred for 12 consecutive months. However, measles continued to be common or even endemic in many other regions of the world, including Western Europe.

After a significant period of success in controlling this serious infection, measles started gradually to re-emerge in the US reaching a record number of 644 cases in 2014. This was the largest number of cases reported in the US since the measles' elimination.

**Current Situation**  
During the first three weeks of this year, 68 measles patients from 11 states were reported to the Centers for Disease Control and Prevention (CDC). Most of these cases are part of the large, ongoing multistate measles outbreak that initially started in California, and currently one Nevada resident is being evaluated for measles. During the 15-year period from 2000 to 2014 Nevada reported 14 cases of measles to CDC, almost all of them were contracted outside the US.

**Measles Signs and Symptoms**  
The incubation period for measles ranges from 7 to 21 days. Measles is a highly infectious airborne acute viral respiratory illness characterized by a prodrome of the following:

- Fever up to 105°F
- Malaise
- Cough
- Coryza
- Conjunctivitis
- Towards the end of the prodrome a pathognomonic enanthema (Koplik Spots) may appear as white spots, often on a reddened background inside the cheeks
- Three to five days after the first symptoms a rash - that spreads from the head to the trunk and lower extremities - appears. This maculopapular rash can also affect the palms of hands and the soles of feet. However, it is important to note that immunocompromised patients may not develop the rash.



**Common Complications**  
Even in previously healthy children, measles can cause serious illnesses requiring hospitalization. Common complications from measles may include the following:

- Otitis media
- Bronchopneumonia
- Laryngitis, tracheitis and bronchitis
- Diarrhea

One per 1,000 measles cases develops acute encephalitis, and about two per 1,000 children who become infected with measles die from respiratory and neurologic complications. Subacute sclerosing panencephalitis is a rare, but fatal degenerative disease of the

Page 1 of 2

January 27, 2015



**Technical Bulletin**  
**Division of Public and Behavioral Health**

Date: February 3, 2015  
Topic: Increased Measles Activity in the United States in 2015  
Contact: Karissa Loper, MPH (775) 684-3209  
To: Public and Private Health Care Providers; Hospitals; Public, Private and Charter Schools

The United States is currently experiencing multi-state outbreaks of measles. Between January 1<sup>st</sup> and 28<sup>th</sup>, 2015, the Centers for Disease Control and Prevention (CDC) have reported 84 cases of measles across 14 states. The Nevada Division of Public and Behavioral Health has confirmed with the Southern Nevada Health District that there are 2 cases of measles in Clark County. CDC urges healthcare professionals to consider measles when evaluating patients with febrile rash and ask about a patient's vaccine status, recent travel history, and contact with individuals who have febrile rash illness. Nevada's healthcare providers are encouraged to consider the possibility of measles for any rash-like illness associated with fever.

Measles is a highly contagious, acute viral illness that can lead to severe complications and death. Healthcare providers should consider the possibility of measles in patients who:

- present with a febrile rash illness and clinically compatible symptoms (cough, coryza (or runny nose) or conjunctivitis (pink eye));
- recently traveled internationally or were exposed to someone who recently travelled internationally;
- have not been fully vaccinated against measles.

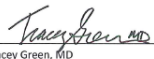
The increase of international importations and subsequent transmission in certain settings in the United States highlights the importance of ensuring age-appropriate vaccination for everyone, maintaining high vaccination coverage in the population, ensuring vaccination coverage of healthcare workers, as well as the need for heightened awareness among providers regarding the possibility of measles. Healthcare providers should also consider measles when evaluating patients for any other febrile rash illnesses.

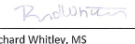
If you suspect a patient may have measles:

1. Promptly isolate the patient and provide them a surgical mask to wear to avoid disease transmission.
2. Immediately report the suspect measles case to your local health authority (or call (775) 400-0333).
3. Obtain specimens for testing from patients with suspected measles; the local health authority will provide guidance on measles testing which includes IgM and PCR testing.

The current situation emphasizes the importance of reporting vaccines into Nevada WebIZ in a timely manner. Public health officials rely on Nevada WebIZ data to address the threat level of vaccine-preventable diseases, like measles, in our communities. All immunizing providers are reminded that data entry into Nevada WebIZ is state law and best practice is to ensure entry within 30 days from date of administration.

Additional guidance for healthcare providers can be found at: <http://www.cdc.gov/measles/hcp/index.html>. Also, see CDC's measles surveillance guidance: <http://www.cdc.gov/vaccines/pubs/surv-manual/chpt07-measles.html>.

  
Tracey Green, MD  
Chief Medical Officer

  
Richard Whitley, MS  
Administrator

February 3, 2015

# Measles Response in Nevada

## □ Local-level Bulletins (examples)

<b>WASHOE COUNTY HEALTH DISTRICT</b> ENHANCING QUALITY OF LIFE	
February 2, 2015 <b>MEDIA ADVISORY</b> <small>Serving Reno, Sparks and all of Washoe County, Nevada. Washoe County is an Equal Opportunity Employer.</small>	
<b>MEDIA CONTACT</b> Phillip Ulibarri, Communications Manager 1001 East Ninth Street   P.O. Box 11130   Reno, Nevada 89520 Office: 775-328-2483   Cell: 775-772-1659   <a href="mailto:PUlibarri@washocounty.us">PUlibarri@washocounty.us</a>   <a href="http://washocounty.us/health">washocounty.us/health</a>	
<b>WHO/WHAT</b>	Washoe County Health District investigates suspected measles cases.
<b>WHEN</b>	February 2, 2015
<b>WHERE</b>	Reno, Sparks, Washoe County, Nevada area
<b>DETAILS</b>	<p>The Washoe County Health District received notifications today of two possible measles cases. At this time, laboratory confirmation is pending; however, symptoms are consistent with measles.</p> <p>One case attended Spanish Springs Elementary School during the infectious period and the Washoe County Health District is requiring the Washoe County School District comprise a list of all susceptible (non-vaccinated and immunocompromised) persons in the entire school, and exclude these individuals from school immediately, with active monitoring for each of them, to be conducted by the Health District.</p> <p>A letter will be distributed to the entire school notifying them of the possible exposure and requesting they self-monitor for 21 days for signs and symptoms of measles.</p> <p>The second case, unrelated to the school district, may have exposed coworkers. They will be notified by the Washoe County Health District to check immunity status, get vaccinated if they are not currently vaccinated and monitor for signs and symptoms.</p> <p>The Health District is also asking any persons who think they have measles to please call your healthcare provider's office, urgent care, or the emergency room before arrival. Clinicians at outpatient settings should notify emergency departments before sending any suspect cases for a further medical evaluation.</p> <p>The Health District's Communicable Disease Investigation Team will continue to monitor each case, and investigate contact exposures as needed.</p> <p><a href="http://www.washocounty.us/health">For more information visit www.washocounty.us/health</a> or <a href="http://www.cdc.gov/measles/">www.cdc.gov/measles/</a>.</p>

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## Southern Nevada HEALTH DISTRICT

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### Health Topics

#### Measles (Rubeola)

[En Español](#)  
[Rubella \(German Measles\)](#)  
[Disease Report Investigation Process](#)



**What is measles?**

Measles is a very contagious viral infection that occurs most often in the late winter and spring. There are references to measles as early as the 7th century.

Measles is an unpleasant illness and it can cause other serious health problems:

- Six to 20 percent of the people who have measles will get an ear infection, diarrhea, or even pneumonia.
- One out of 1,000 people with measles will develop inflammation of the brain
- One out of 1,000 will die.

**What are the symptoms of measles?**

About ten days after exposure to the virus, the infected person has a fever lasting two to four days that can peak as high as 103F to 105F. This is followed by the onset of a cough, runny nose, and/or red eyes.

The rash usually begins 14 days after exposure and lasts five to six days. The rash begins at the hairline, and then involves the face and neck. Over the next three days, the rash gradually spreads downward and outward, reaching the hands and feet.

**How is measles spread?**

The mucus in the nose and throat of an infected person contains the measles virus. When an infected person sneezes or coughs, droplets containing the virus are sprayed into the air. The droplets can directly land in other people's noses or throats when they breathe.

The virus also remains active up to two hours on surfaces and people's hands can transfer the virus to their nose or throat from a contaminated surface (door knobs, countertops, keyboards, faucets).

The virus can be spread by a person with measles from four days prior to the onset of the rash to four days after the onset.



**Contact Information**  
(702) 759-1300  
[snhdpublicinformation@snhdmail.org](mailto:snhdpublicinformation@snhdmail.org)

February 2, 2015



# Vaccination & Education

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## ☐ Vaccination:

- Maintain high coverage rates amongst children and adults
- Ensure rapid public health response
  - ☐ Case identification
  - ☐ Home quarantine
  - ☐ Contact tracing

## ☐ Education:

- Cocooning



# Regulatory Role

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- ❑ Child Care Licensing enforces NRS 432A.230.1: Except as otherwise provided in subsection 3 and unless excused because of religious belief or medical condition, a child may not be admitted to any child care facility within this State, including a facility licensed by a county or city, unless the parents or guardian of the child submit to the operator of the facility a certificate stating that the child has been immunized and has received proper boosters for that immunization or is complying with the schedules established by regulation pursuant to NRS 439.550
- ❑ Child Care Licensing enforces NAC 432A.370: Evidence of each child's health must be presented to the director of a facility, other than an accommodation facility or a facility that provides care for ill children, within 30 days after the child's initial admission. The evidence must include a written statement from a licensed physician or registered nurse attesting to the status of the child's health and stating that all known special conditions are under treatment and the child is capable of adjusting to the programs of the facility. 2. A licensee of each such facility shall keep a record of each child which includes any pertinent information on the status of the child's health and any special needs of the child.
- ❑ Child Care Licensing enforces NAC 432A.323: Requires caregivers to receive two hours of recognizing and symptoms of illness for continued educational purposes.



# Statutes and Licensing

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- ❑ Helps establish a system to reduce risk of exposure.
- ❑ Provides educational tools for facilities, teachers, parents to use.
- ❑ Helps to ensure equity among all licensed child care facilities to keep Nevada's children safe.
- ❑ Keeps our community informed, educated.
- ❑ Keeps lines of communication open with our community partners, and our key stakeholders.



# QUESTIONS

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## CONTACTS

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